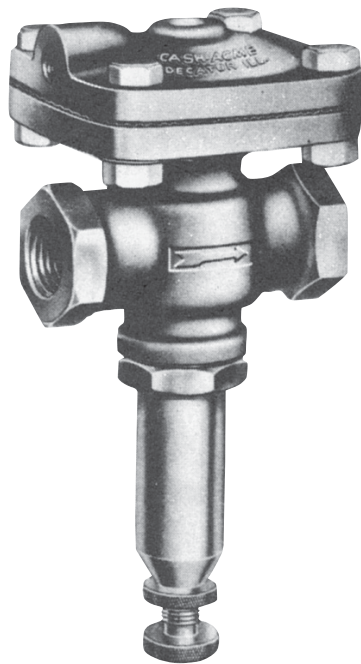




CASH VALVE TYPES D-51/D-52 VACUUM VALVES

Vacuum regulators and breakers to maintain system vacuum levels accurately



FEATURES

- Fully adjustable.
- Choice of vacuum ranges.
- Large ports.
- Tight seating
- All parts easily replaceable on-line.
- Long, light spring provides maximum sensitivity.

GENERAL APPLICATION

Designed for regulation, where a predetermined vacuum is to be maintained accurately in a closed system or for vacuum breaking, by admitting atmosphere or other gases or liquids automatically when the vacuum level exceeds the valve setting.

TECHNICAL DATA

Sizes:	1/2" to 2" (15 mm to 50 mm)
Connections:	Threaded NPTF
Adjustable vacuum range:	0" to 30" Hg (0 to 762 mm Hg)

CASH VALVE TYPES D-51/D-52 VACUUM VALVES

Types D-51 and D-52

Types D-51 vacuum regulator and D-52 vacuum breaker for use on any non-corrosive gases or liquids.

CONSTRUCTION

All bronze, neoprene/nylon diaphragms, chrome plated bronze body seats, composition seat discs; large ports, high capacity, knurled-head adjusting screw with lock nut, screwed ends, tight seating, connection above diaphragm (normally exposed to atmosphere) is 1/8" (3.2 mm) NPTF on 1/2" and 3/4" (15 and 19 mm) sizes and 1/4" (7 mm) NPTF on 1"-2" (25-50 mm) sizes. Available over a wide adjustment range and install in any position.

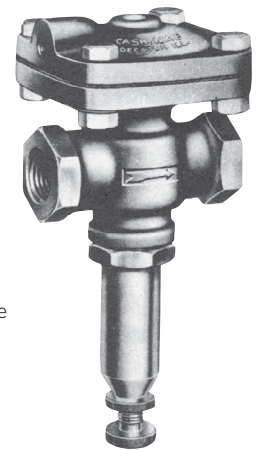
PRINCIPLES OF OPERATION

Type D-51

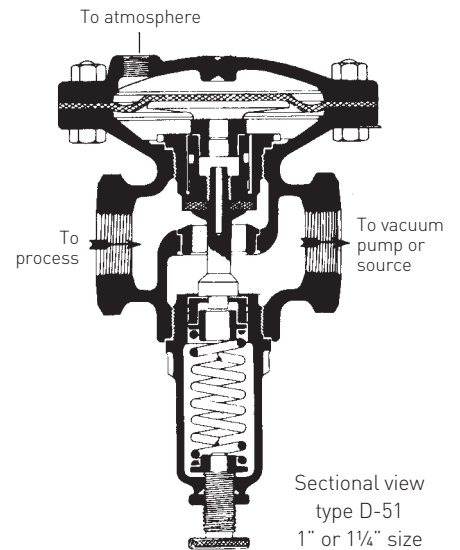
The valve inlet is connected to the system in which the lower vacuum is to be held; the valve outlet is connected to a source - for example, a vacuum pump. Spring is adjusted for correct vacuum on inlet side, assume 5" Hg. Outlet side is subjected to pump vacuum of 25" Hg. (constant or variable). Any change in controlled vacuum (5") produces valve movement to correct for that change, maintaining the inlet vacuum within very narrow limits. There's no step- or snap-action as it's full floating and automatic. Turning the adjusting screw clockwise increases vacuum setting; counter-clockwise gives reduced vacuum setting.

Type D-52

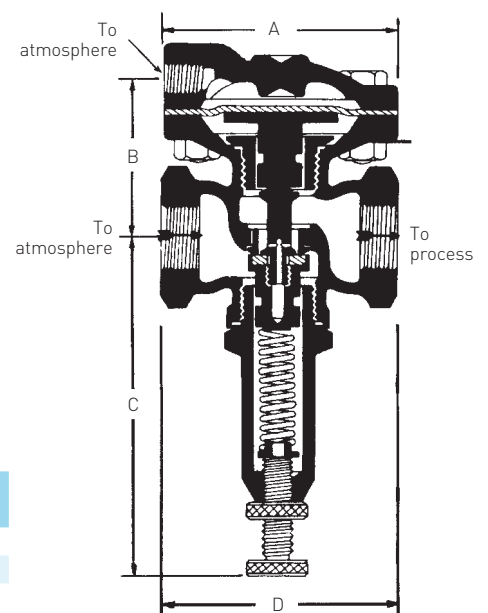
The valve inlet is exposed to atmosphere (or to other gases or liquids being admitted); the valve outlet is connected to equipment in which vacuum is to be maintained automatically. Spring force holds the valve closed at the desired vacuum setting. Increase in vacuum on the outlet side (also effective in chamber below diaphragm) pulls the diaphragm downward to increase valve opening, admitting atmosphere (or other gases or liquids) into the vacuum system and 'breaking' the vacuum back to the valve setting. Full floating, automatic action. Turning the adjusting screw clockwise produces a higher vacuum setting; counter-clockwise lowers the vacuum setting.



Type D-52
1/2" or 3/4" size



Sectional view
type D-51
1" or 1 1/4" size



Sectional view type D-52
1/2" or 3/4" size

Type	Size NPS	Dimensions NPS				Ship. wt. pounds
		A	B	C	D	
D-51 / D-52	1/2, 3/4	2 7/8	1 15/16	4 7/8	2 7/8	3 1/2
D-51 / D-52	1, 1 1/4	5 7/8	3 1/2	5 3/4	4 1/2	13
D-51 / D-52	1 1/2, 2	5 7/8	4	9	5 3/4	21

CASH VALVE TYPES D-51/D-52 VACUUM VALVES

SELECTION GUIDE

Example:	D51	C	W	S	O	S	B	01	-	E	1
Model											
D51	D-51 Bronze vacuum regulator										
D52	D-52 Bronze vacuum breaker										
Valve size											
C	1/2"										
F		1 1/4"									
D	3/4"										
G			1 1/2"								
E	1"										
H				2"							
Service											
W	Water										
A	Air										
Connection style											
S	Side inlet/Side outlet - Straight thru with NPT connections										
Seat material											
B	Buna-N										
S	Silicone										
Chamber style											
S	Standard										
V	Vented (D-52 1" and 1 1/4" only)										
Diaphragm material											
B	Buna-N										
Variation											
01	Diaphragm chamber connection over inlet										
02	Diaphragm chamber connection over outlet										
Design revision											
(-)	Original design										
Spring material											
E	Stainless steel										
Spring range	Refer to the table below										

STANDARD SPRING RANGES, in/hg

Type	Size, in.	1	2
D-51, D-52	1/2, 3/4	2-30	----
	1, 1 1/4	0-5	2-30
	1 1/2	0-10	8-30

NOTE

NPTF, also referred to as 'Dryseal' thread, is designed to provide a more leak-free seal without the use of PTFE tape or other sealant compound. NPTF threads are interchangeable with NPT threads and are standard on all Cash Valve products.

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